HP ProLiant SL165s G7 Server
Installation Instructions

Part Number 635251-002

⚠ Important Safety Information

Before installation, read Important Safety Information on HP website **http://www.hp.com/support/importantsafetyinformation**

قبل التثبيت، اقرأ معلومات هامة حول السلامة في موقع HP على ويب.

Před zahájením instalace si přečtěte *důležité bezpečnostní informace* uvedené na webovém serveru společnosti HP.

进行安装前，请先参阅 HP 网站上的*“重要安全信息”*。

在安裝前，請參閱 HP 網站上的*「重要安全資訊」*。

Før installation, læs *Vigtige sikkerhedsoplysninger* på HPs websted.

Lesen Sie vor dem Installieren das Dokument *Wichtige Sicherheitshinweise* auf der HP Website.

Enne paigaldamist tutvuge *olulise ohutusteabega* HP veebisaidil.

Antes de la instalación, lea la sección *Información de seguridad importante* en la página web de HP.

Antes de proceder a la instalación, lea la información importante sobre seguridad en el sitio Web de HP.

Avant installation, lisez attentivement le document *Informations importantes relatives à la sécurité* sur le site Web HP.

Πριν από την εγκατάσταση, διαβάστε τις *Σημαντικές πληροφορίες σχετικά με την ασφάλεια* στην τοποθεσία της HP στο web.

לפני ההתקנה, קרא את *Important Safety Information* באתר האינטרנט של HP.

Prije instaliranja pročitajte *važne informacije o sigurnosti* na HP-ovim web-stranicama.

Prima dell'installazione, consultare la sezione *Informazioni sulla sicurezza e sulle norme vigenti* del sito Web di HP.

インストール前にHPのWebサイトで『安全に使用していただくために』をお読みください。

설치를 시작하기 전에 HP 웹 사이트에서 *주요 안전 수칙을* 참조하십시오.

Pirms instalēšanas izlasiet sadaļu *Svarīga drošības informācija* HP mājas lapā.

Prieš įdiegdami perskaitykite *Svarbią saugos informaciją*, pateiktą HP tinklalapyje.

A telepítés elott tekintse át a HP webhelyén található *fontos biztonsági tudnivalókat.*

Lees *Belangrijke veiligheidsinformatie* op de HP website, voordat u aan de installatie begint.

Les *Viktig informasjon om sikkerhet* på HPs nettsted før du installerer.

Przed instalacją przeczytaj Ważne *informacje dotyczące bezpieczeństwa* w witrynie sieci Web firmy HP.

Antes de instalar, leia o documento *Informações importantes de segurança* no sitio web da HP.

Antes de instalar, leia o documento *Informações importantes sobre segurança* no site da HP.

Перед установкой ознакомьтесь с документом *«Указания по технике безопасности»* на веб-узле HP.

Pred inštaláciou si prečítajte článok *Dôležité bezpečnostné informácie* na webovej lokalite spoločnosti HP.

Pred namestitvijo preberite razdelek *Pomembne varnostne informacije* na HP-jevem spletnem mestu.

Lue ennen asennusta *Tärkeitä turvallisuusohjeita* HP:n verkkosivuilta.

Innan du installerar ska du läsa *Viktig säkerhetsinformation* på HP:s webbplats.

Yüklemeden önce HP web sitesindeki *Önemli Güvenlik Bilgileri* bölümünü okuyun.

Перед встановленням прочитайте *“Важливу інформацію з безпеки”* на веб-сайті HP.

For translated instructions, see the Easy Set-up CD or http://www.hp.com/support

Para obter instruções traduzidas, consulte Easy Set-up CD ou HP.com

Übersetzte Gebrauchsanleitungen finden Sie auf der Easy Set-up CD oder unter HP.com

Para obtener las instrucciones traducidas, consulte el Easy Set-up CD o la página web HP.com

Pour obtenir des instructions traduites, reportez-vous au CD Easy Set-up ou visitez le site HP.com

翻訳された手順については、Easy Set-up CDまたはHP.comを参照してください。

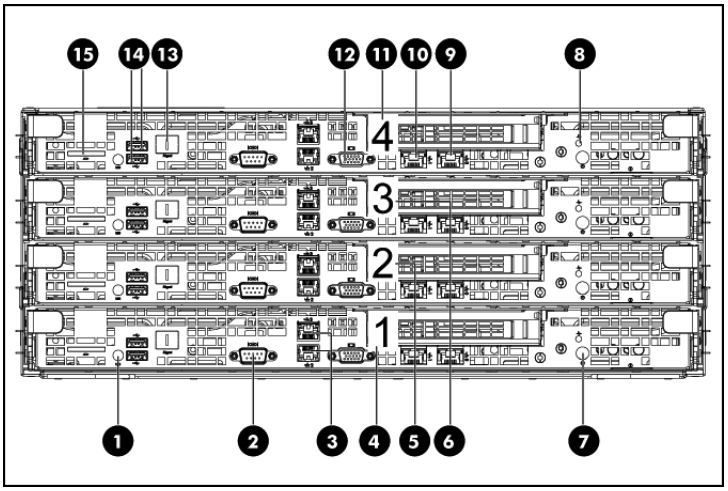
请参见 Easy Set-up CD 或访问 HP.com 以查看经过翻译的说明

Identifying server components

Front panel components

SL165s G7 Server Front Panel Components

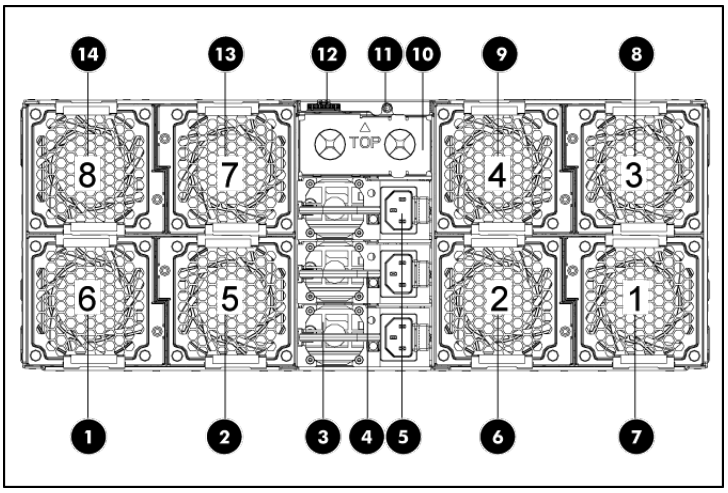
Figure 1 Front panel components of the s6500 chassis with 4 SL165s G7 servers



Item	Description
1	UID LED/Switch
2	Serial port
3	Top: NIC4 Connector Bottom: NIC3 Connector
4	Server 1
5	Server 2
6	Server 3
7	Power LED/Switch
8	Health LED
9	NIC1 Connector
10	NIC2 Connector
11	Server 4
12	VGA port
13	Mgmt NIC (Optional)
14	Top: USB 2.0 Port Bottom: USB 2.0 Port
15	SD card slot (Optional)

Rear Panel Components

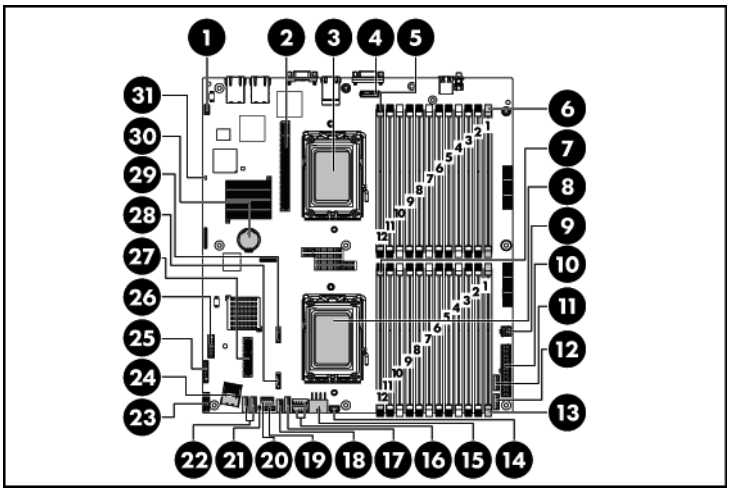
Figure 2 Rear panel components of the s6500 chassis with 4 SL165s G7 servers



Item	Description
1	Fan 6
2	Fan 5
3	Power Supply 1
4	Power Supply 2
5	Power Supply 3
6	Fan 2
7	Fan 1
8	Fan 3
9	Fan 4
10	Power Blank
11	Chassis UID
12	SLAPM (SL Advanced Power Manager) connector
13	Fan 7
14	Fan 8

System Board Components

Figure 3 System Board Components



Item	Designator	Description
1	J1	System maintenance jumper
2	J301	PCIe x16 slot
3	U1	Processor 1
4	J11	Mgmt card connector
5	J110	DIMM slot 12 for processor 1
6	J103	DIMM slot 1 for processor 1
7	J210	DIMM slot 12 for processor 2
8	U2	Processor 2
9	J54	4-pin power connector
10	J52	24-pin power connector
11	J61	Fan connector 1
12	J62	Fan connector 2
13	J203	DIMM slot 1 for processor 2
14	J68	Backplane I^2C connector
15	J53	8-pin power connector
16	J63, J64	Fan connectors 3/4
17	J65	Fan connector 5
18	J49	Internal USB 2.0 port
19	J8	Front panel USB 2.0 port
20	J81	SD card USB 2.0 port
21	J100	SAS LED connector
22	J66, J69	Fan connectors 6/7
23	J55	Power backplane control connector
24	J13	Mini-SAS connector for SATA
25	J98	Front panel header
26	J56	TPM connector
27	J78	PCIe x4 slot
28	J23	ODD 1 SATA connector
29	J20	ODD 2 SATA connector
30	BH1	3V CMOS battery (CR2032)
31	J6	NMI jumper

Server Configuration Resources

In addition to this Installation Sheet, other resources are available for more information regarding the configuration and maintenance of your server:

- For safety information and detailed procedures relating to installation of options, refer to any installation instructions that came with the option, as well as the *HP ProLiant SL165s G7 Server Maintenance and Service Guide*.
- For safety information, regulatory notices, and detailed procedures related to the rest of the steps listed in the "Configuring the Server" section, refer to relevant chapter of the *HP ProLiant SL6000/6500 Scalable System User Guide*.
- For information relating to system BIOS configuration and operating system installation, refer to relevant section of the *HP ProLiant SL165s G7 Server Software Configuration Guide*.
- You can also access additional information and documentation from the HP website at **http://www.hp.com/servers/proliantsl165s**.

Server Configuration Overview

The steps listed below give an overview of the necessary setup procedures for preparing the HP ProLiant SL165s G7 Server for operation:

1. Connect the AC power cord and peripheral devices.
2. Power up the server.
3. Press "F10" to enter BIOS setup.
4. Note the server BIOS version.
5. Verify the server BIOS version against the latest BIOS version listed for this server on the HP website: **http://www.hp.com**.
6. If you do not have the latest BIOS, update the BIOS now. Refer to the *HP ProLiant SL165s G7 Server Maintenance and Service Guide* available on the HP website: **http://www.hp.com**.
7. Install a supported operating system of your choice. For detailed procedures, refer to the documentation provided by the operating system vendor. For a list of operating systems supported by your ProLiant server, go to **http://www.hp.com/go/supportos**.

Pre- and Post-installation Procedures

When installing additional options in your HP ProLiant SL165s G7 Server, observe the following procedures:

Pre-installation procedures

1. Turn off the server and all the peripherals connected to it.
2. Remove the tray from the chassis by following the procedure described later in the "Removing the tray" section.

Post-installation procedures

1. Be sure all components are installed according to the described step-by-step instructions.
2. Check to make sure you have not left loose tools or parts inside the server.
3. Reinstall the PCI riser, peripherals, and system cables that you have removed.
4. Reinstall the tray into the chassis.
5. Connect all external cables to the system.
6. Press the power button on the front panel to turn on the server.

Removing the Tray

You need to remove the tray from the chassis before you can remove or replace a tray component.

To remove the tray:

1. Press the two handles on both sides at the same time to release the tray.
2. Pull out the tray from the chassis until the release latch catches.
3. Firmly holding the tray, press the release latch on both sides of the tray.
4. Remove the tray from the chassis.

Figure 4 Removing the SL165s G7 server tray

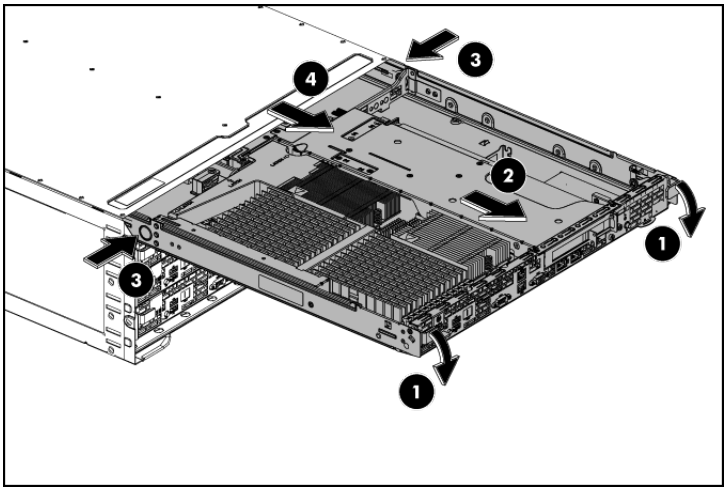
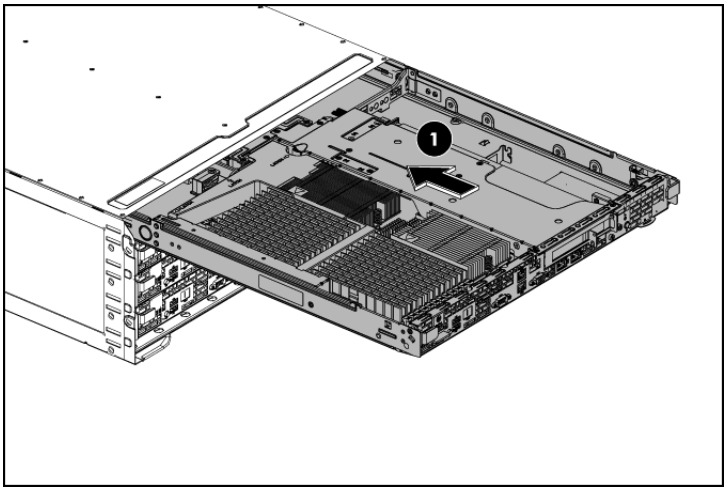


Figure 5 Installing the SL165s G7 server tray



Installing the Hard Disk Drive

One SL165s G7 server tray can accommodate up to 6 LFF SATA, 4 LFF SAS, or 8 SFF SATA/SAS Non Hot-Plug hard disk drives, and the chassis can accommodate 4 server trays for up to 24 LFF SATA or 32 SFF Non Hot-Plug hard disk drives. The server supports both SAS and SATA hard disk drives.

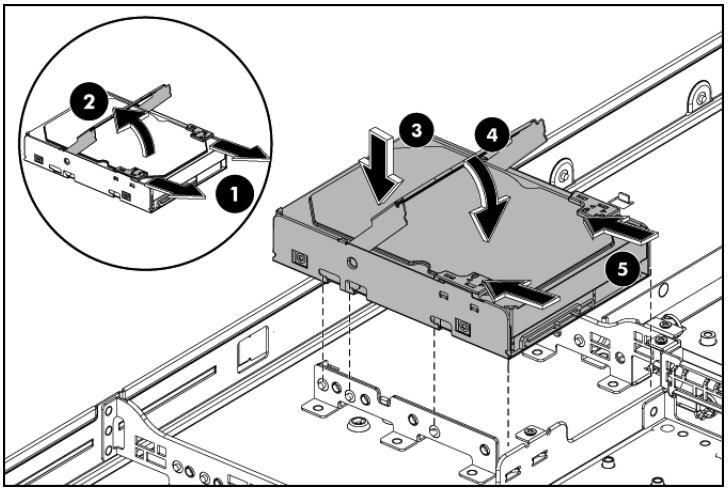
NOTE: For specific supported hard drive configurations and cable routing, refer to HP ProLiant SL165s G7 Server Maintenance and Service Guide located on the HP website: **http://www.hp.com/support/ProLiant_SL165sG7_MSG_en**

CAUTION: Drives can be damaged by static electricity. Before handling drives, touch an unpainted metal surface to discharge static electricity.

To install the LFF hard disk drive in the server tray:

1. Unlock the HDD carrier latches.
2. Lift the HDD carrier handle up.
3. Insert the HDD carrier and align the pins.
4. Press the HDD carrier handle down.
5. Lock the HDD carrier latches.

Figure 6 Installing the hard disk drive



Installing the Memory Module

Memory Module Population Order (From left to right)

RDIMM population order without QR DIMM

Memory Socket	1	7	4	10	3	9	6	12	2	8	5	11

UDIMM population order without QR DIMM

Memory Socket	1	7	4	10	3	9	6	12	X	X	X	X

Population order with QR along with SR/DR DIMM

Memory Socket	2	8	5	11	1	7	4	10	3	9	6	12

NOTE:

SR = Single Rank, DR = Dual Rank, QR = Quad Rank.

Population rules must be followed for both processors.

Memory modules may be populated one at a time per processor, but populating two at a time per processor provides better performance.

Memory modules should be populated four at a time per processor for best performance.

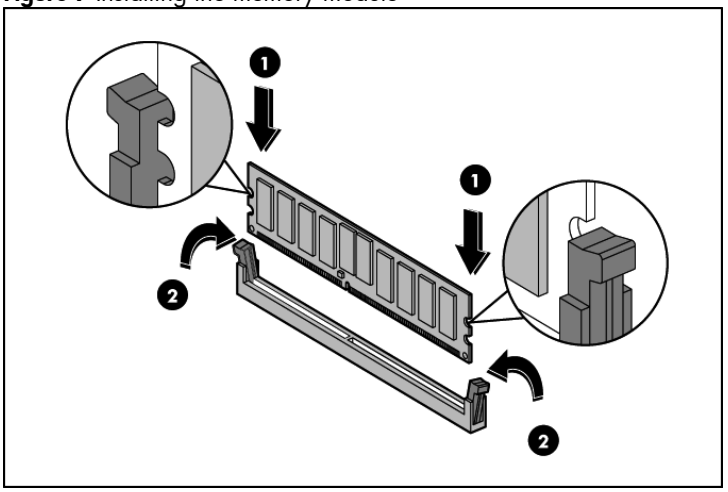
Quad Rank memory module can only be installed in memory sockets 2, 5, 8, and 11.

CAUTION: DIMMs can be damaged by improper handling. Always use an anti-static wrist strap and grounding mat, and discharge static electricity before touching DIMMs.

To install a memory module:

1. Align the notch on the bottom edge of the module with the keyed surface of the DIMM slot and then press the module fully into the slot.
2. Firmly press the holding clips inward to secure the memory module in place.

Figure 7 Installing the memory module



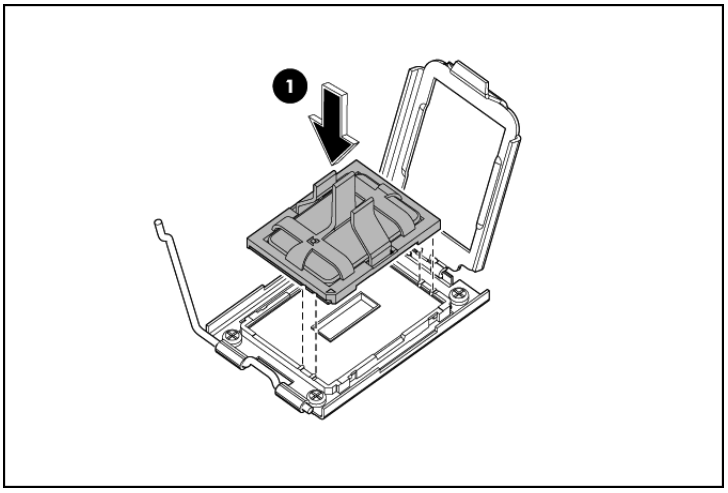
DIMM slots are structured to ensure proper installation. If you insert a DIMM but it does not fit easily into the slot, you may have inserted it incorrectly. Reverse the orientation of the DIMM and insert it again.

Installing the Processor

To install the new processor:

1. Insert the processor in the tool.
2. Align the processor installation tool with the socket and install the processor.

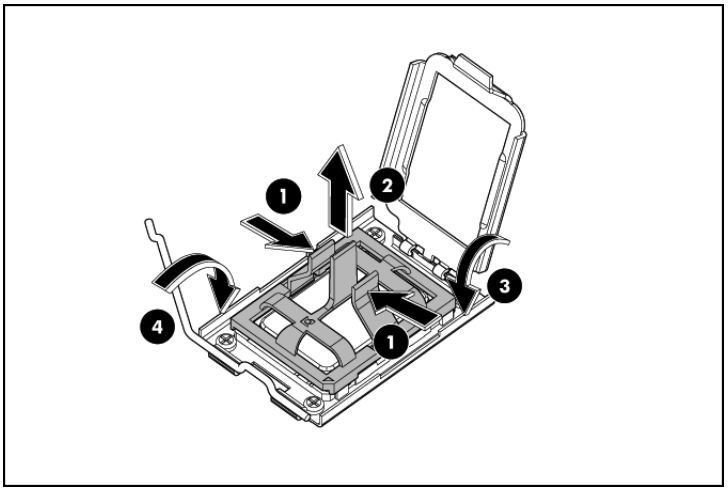
Figure 8 Installing the processor



IMPORTANT: Be sure the processor remains inside the processor installation tool.

1. Press down firmly until the processor installation tool clicks and separates from the processor, and then remove the processor installation tool.
2. Close the processor socket retaining bracket and the processor retaining latch

Figure 9 Removing the processor installation tool and close the processor socket



For processor removal, reverse the above installation procedures.

To install the heat sink:

IMPORTANT: The one close to front panel is processor 1 and the other one is processor 2. During install the heat sink, make sure to install heat sink 1(on the processor 1) with 17 fin pitches, while heat sink 2(on the processor 2) with 38 fin pitches.

1. Properly align the heat sink mounting pins to the system board mounting holes.
2. Tighten the mounting pins clockwise to secure the heat sink connection to the system board.

CAUTION: To prevent the heat sink from tilting to one side during installation/removal, turn each screw a couple of turns, alternatively between both of them, and then apply the final torque. Do not over tighten the spring loaded screws to prevent them from breaking off. A maximum torque of 4.5 inch-lb is set for each screw.

Figure 10 CPU 1 installing the heat sink with 17 fin pitches

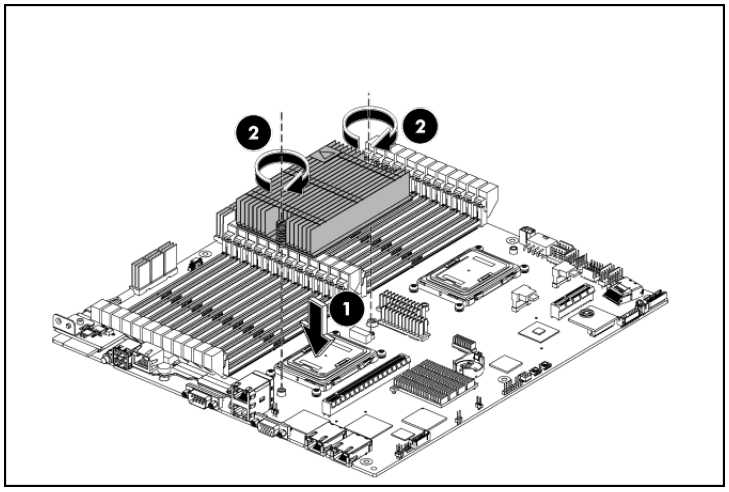
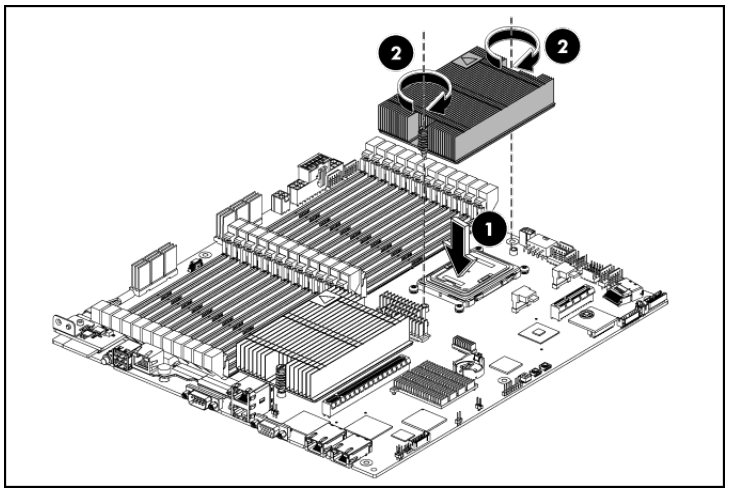


Figure 11 CPU 2 installing the heat sink with 38 fin pitches



CAUTION: Be sure that the heat sink sits squarely on the processor, or overheating and damage to the processor may occur.

IMPORTANT: If the heat sink has been removed for any reason, it is critical that you apply more thermal interface material to the integrated heat spreader on the processor to ensure proper thermal bonding between the processor and the heat sink. Clean the contact surface of both the processor and heat sink with an alcohol pad, then re-apply an HP-approved thermal interface material before reinstalling the processor. Use a pattern of five dots when applying the thermal interface material—one dot in the center, and one dot at each corner.

NOTE: Do not over tighten the heat sink's spring-loaded screws to prevent them from breaking off.

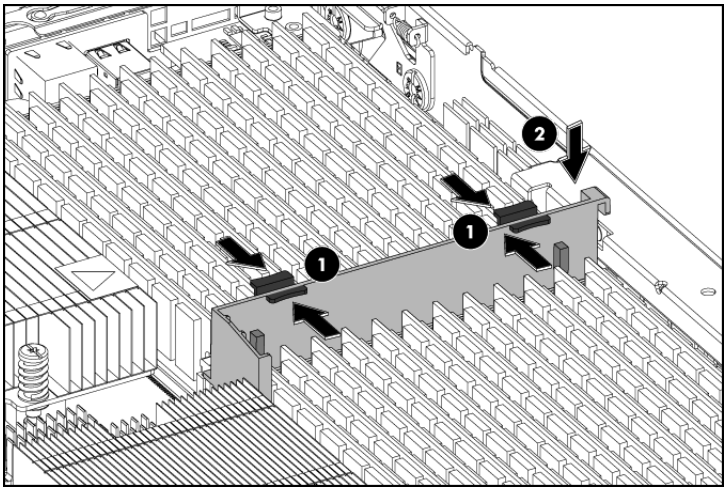
Installing the DIMM Air Baffle

NOTE: The DIMM air baffle is required for proper thermal solution.

1. Hold the latch on the top of the DIMM air baffle and align it to the system board.
2. Press down to make sure the DIMM air baffle completely installed

NOTE: To check and ensure the 2 ribs are installed between DIMM1 and DIMM2, DIMM11 and DIMM12.

Figure 12 Installing the DIMM air baffle into the tray



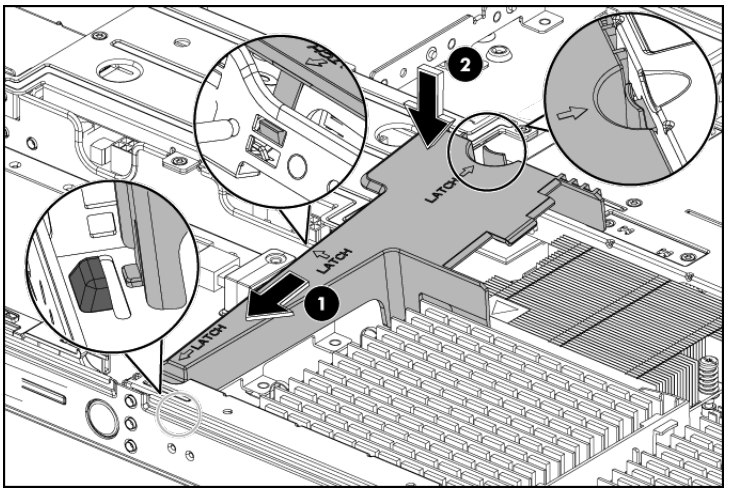
Installing the CPU Air Baffle

NOTE: The CPU air baffle is required for proper thermal solution.

To install the CPU air baffle:

1. Align the CPU air baffle to the tray.
2. Secure the left latch to the left bracket, the middle latch to the middle bracket and the right latch to the PCIe x16 bracket on the tray.
3. Press down the CPU air baffle to make sure it completely installed on the tray.

Figure 13 Installing the CPU air baffle into the tray



Additional Documentation

For additional documentation, refer to *HP ProLiant SL165s G7 Server Easy Set-up CD*. You can also access additional information and documentation from the HP external website, either by connecting directly or through the Easy Set-up CD.

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